AMENDMENTS TO THE CLAIMS

1-66. (Canceled)

67. (Currently Amended) A signal transmission system comprising:

a pair of cross-coupled amplifiers;

a first transmission member having a first length and an impedance less than 100 ohms, the first transmission member coupled to a first of the pair of cross-coupled amplifiers;

a second transmission member having a second length, the second transmission member coupled to a second of the pair of cross-coupled amplifiers;

a first and a second signal source respectively having first and second signal outputs respectively coupled to the first and second transmission members;

a termination circuit connected to at least one of the first transmission member and the second transmission member; and

an impedance adjusting component coupled to the second transmission member and adapted to affect, by the coupling thereto, a signal propagation factor of the second transmission member, whereby a relationship may be established between respective transmission times through the first and second transmission members of first and second signals received at the first and second transmission members from the respective first and second signal source outputs.

68. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the impedance adjusting component comprises:

an electrical inductor.

69. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 68 wherein the electrical inductor comprises a spiral inductor.

70. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the impedance adjusting component comprises:

a material having a magnetic permeability, the material adapted to be incorporated into the second transmission member.

71. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the impedance adjusting component comprises:

an electrical capacitor.

72. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the relationship established between respective transmission times comprises equalization of the respective transmission times.

73. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the first length is different from the second length and the respective transmission times through the respective first and second transmission members are equal.

74. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the first transmission member is formed of a transmission medium comprising an electrical transmission medium.

75. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 74 wherein the electrical transmission medium comprises a first conductor, a second conductor, and a dielectric material disposed between the first conductor and the second conductor.

76. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 75 wherein the electrical transmission medium comprises:

a first conductor;

a second conductor; and

an evacuated region disposed between the first conductor and the second conductor.

77. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 74 wherein the electrical transmission medium comprises first and second conductors disposed in a coaxial relationship to one another and a dialectic medium disposed between the first and second conductors.

78. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the first transmission member is formed of a transmission medium comprising an optical transmission medium.

79. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the impedance adjusting component comprises a plurality of capacitors coupled to the second transmission member at a respective plurality of coupling points.

80. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 wherein the first and second signals comprise first and second digital signals.

81. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 67 further comprising:

first and second signal receivers coupled to the first and second transmission members at respective first and second signal inputs.

82. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 81 wherein the first input has an input impedance substantially equal to a characteristic impedance of the first transmission member and the second input has an input impedance substantially equal to a characteristic impedance of the second transmission member.

83-85. (Canceled)

86. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 81 wherein the first receiver comprises a first input adapted to be coupled to the first transmission member and a second input adapted to be coupled to a reference signal source.

87. (Currently Amended) A signal transmission system comprising:

a pair of cross-coupled amplifiers;

a first transmission member having a first length and an impedance less than 100 ohms, the first transmission member coupled to a first of the pair of cross-coupled amplifiers;

a second transmission member having a second length, the second transmission member coupled to a second of the pair of cross-coupled amplifiers;

a signal receiver having first and second signal inputs coupled to the first and second transmission members respectively;

first and second signal sources coupled to the first and second transmission members respectively;

a termination circuit connected to at least one of the first transmission member and the second transmission member for terminating at least one of the first transmission member and the second transmission member in a characteristic impedance of at least one of the first transmission member and the second transmission member; and

an impedance adjusting component coupled to the second transmission member and adapted to affect, by the coupling thereto, a signal propagation factor of the second transmission member, whereby a relationship may be established between respective transmission times through the first and second transmission members of first and second signals received at the first and inputs from the first and second signal sources respectively.

88. (Currently Amended) A signal transmission system comprising:

a first and a second signal source respectively having first and second signal outputs;

a first transmission member coupled to the first output, the first transmission member having a first length, the first transmission member having an impedance less than 100 ohms;

a second transmission member coupled to the second output, the second transmission member having a second length different from the first length, the second transmission member having a second characteristic impedance, whereby a relationship may be established between respective transmission

times through the first and second transmission members of first and second signals received at the first and second transmission members from the respective first and second signal source outputs by changing the second impedance;

a pair of cross-coupled amplifiers, a first of the pair of cross-coupled amplifiers coupled to the first transmission member, a second of the pair of cross-coupled amplifiers coupled to the second transmission member; and

a termination circuit connected to at least one of the first transmission member and the second transmission member for terminating at least one of the first transmission member and the second transmission member.

89. (Currently Amended) [[A]] The signal transmission system of ~~as defined in~~ claim 88 wherein the first characteristic impedance depends on a magnetic permeability of a material of the first transmission member.

90-91. (Canceled)

92. (Currently Amended) A method of synchronizing first and second operations of respective first and second ~~circuits~~ cross-coupled amplifiers comprising:

receiving a first signal transition at the first ~~circuit~~ cross-coupled amplifier from a first signal source through a first transmission member, the first transmission member having a first signal propagation factor and a first

geometric length, the first signal propagation factor related to an impedance less than 100 ohms of the first transmission member;

receiving a second signal transition at the second ~~circuit~~ cross-coupled amplifier from a second signal source through a second transmission member, the second transmission member having a second signal propagation factor and a second geometric length, the second signal propagation factor related to a second characteristic impedance of the second transition member, the second geometric length different from the first geometric length;

terminating the first characteristic impedance of the first transmission member and the second characteristic impedance of the second transmission member; and

receiving the first and second signal transitions at the first and second transmission members synchronously.

93. (Currently Amended) [[A]] The method of ~~synchronizing first and second operations of respective first and second circuits as defined in~~ claim 92 wherein the receiving the first and second signal transitions at the first and second transmission members synchronously comprises receiving the first and second signal transitions at the first and second transmission members substantially simultaneously.

94. (Currently Amended) [[A]] The method of ~~synchronizing first and second operations of respective first and second circuits as defined in~~ claim 92 wherein the second characteristic impedance depends on an impedance of at least one impedance modifying component coupled to the second transmission member.

95. (Currently Amended) [[A]] The method of ~~synchronizing first and second operations of respective first and second circuits as defined in~~ claim 94 wherein the impedance modifying component comprises a spiral inductor.

96. (Currently Amended) [[A]] The method of ~~synchronizing first and second operations of respective first and second circuits as defined in~~ claim 94 wherein the impedance modifying component comprises a capacitor.

97. (Currently Amended) [[A]] The method of ~~synchronizing first and second operations of respective first and second circuits as defined in~~ claim 92 wherein the second characteristic impedance depends on a magnetic permeability of a material incorporated into the second transmission member.

98. (Previously Presented) The signal transmission system of claim 67, wherein the termination circuit terminates at least a first characteristic impedance of the first transmission member and the second characteristic impedance of the second transmission member.

99. (New) An integrated circuit interconnection comprising:

a plurality of transmission lines;

at least one of the transmission lines having a characteristic impedance less than 100 Ohms, the at least one transmission line including a first end and a second end;

a driver coupled to the first end of the at least one transmission line;

a termination circuit at the second end of the at least one transmission line having an impedance corresponding to the characteristic impedance of the transmission line, the termination circuit comprising an amplifier circuit comprising a pair of cross coupled amplifiers coupled to the second end of the at least one transmission line; and

a plurality of components selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements, the components being connected at spaced intervals to the at least one transmission line between the first and second ends to change an apparent length of the at least one transmission line to match with at least one other of the plurality of transmission lines.

100. (New) The integrated circuit interconnection of claim 99, wherein the components change the propagation constant and delay time of the transmission line.

101. (New) The integrated circuit interconnection of claim 99, wherein the components are a plurality of capacitive elements.

102. (New) The integrated circuit interconnection of claim 101, wherein the capacitive elements are selected from the group consisting of metal-metal, metal-polysilicon and polysilicon-polysilicon capacitors.

103. (New) The integrated circuit interconnection of claim 99, wherein the components are a plurality of inductive elements.

104. (New) The integrated circuit interconnection of claim 99, wherein the components are a combination of capacitive and inductive elements.

105. (New) The integrated circuit interconnection of claim 99, wherein the transmission line has a characteristic impedance of less than 50 Ohms.

106. (New) The integrated circuit interconnection of claim 99, wherein a plurality of interconnection lines are connected to the at least one transmission line.

107. (New) The integrated circuit interconnection of claim 99, wherein the capacitive elements are gate capacitances of field effect transistors used as capacitors.

108. (New) The integrated circuit interconnection of claim 99, wherein the inductive elements are spiral inductors serially implanted in the at least one transmission line.

109. (New) The integrated circuit interconnection of claim 99, wherein the inductive elements are formed by depositing material with a higher magnetic permeability on the at least one transmission line for increasing self inductance of the at least one transmission line.

110. (New) The integrated circuit interconnection of claim 99, wherein the termination circuit is formed in complementary metal-oxide semiconductor (CMOS) technology on the second end of the at least one transmission line.

111. (New) The integrated circuit interconnection of claim 99, wherein the termination circuit comprises a differential receiver coupled to the second end of the at least one transmission line.

112. (New) An integrated circuit interconnection comprising:

a transmission line having a characteristic impedance less than 100 Ohms, the transmission line including a first end and a second end;

a driver coupled to the first end of the transmission line;

a termination at the second end of the transmission line having an impedance corresponding to the characteristic impedance of the transmission line; and

a plurality of components selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements, the components being connected at spaced intervals to the transmission line between the first and second ends to change an apparent length of the transmission line, wherein the termination circuit comprises an amplifier circuit coupled to the second end of the transmission line, wherein the termination circuit comprises an amplifier circuit comprising a pair of cross coupled CMOS amplifiers coupled to the second end of the transmission line, and wherein each amplifier comprises:

a first transistor of a first conductivity type having a source region, a drain region, and a gate opposing a body region;

a second transistor of a second conductivity type having a source region, a drain region, and a gate opposing a body region;

a signal input node coupled to the source region for the first transistor;

a signal output node coupled to the drain regions for the first transistor and the second transistor; and

a third transistor of a first conductivity type having a source region, a drain region, and a gate opposing a body region, wherein the signal input node is coupled to the gate of the third transistor, wherein the drain region is coupled to a positive voltage supply and the source region is coupled to a lower voltage potential, and wherein the drain region is coupled to the gate of the first transistor;

the second end of the transmission line being coupled to the signal input of a first one of the pair of cross coupled CMOS amplifiers; and

a second transmission line coupled to the signal input of a second one of the pair of cross coupled CMOS amplifiers.

113. (New) The integrated circuit interconnection of claim 112, wherein the pair of cross coupled CMOS amplifiers comprise a pair of CMOS amplifiers.

114. (New) The integrated circuit interconnection of claim 112, wherein the first transistor of a first conductivity type includes an n-channel metal-oxide semiconductor (NMOS) transistor, and wherein the second transistor of a second conductivity type includes a p-channel metal-oxide semiconductor (PMOS) transistor.

115. (New) The integrated circuit interconnection of claim 114, wherein each amplifier in the amplifier circuit includes a fourth transistor of a first conductivity type

having a source region, a drain region, and a gate opposing a body region, wherein the drain region is coupled to the source region for the first transistor.

116. (New) The integrated circuit interconnection of claim 115, wherein the signal output node for each amplifier is cross coupled to the gate of the second transistor and the fourth transistor on the other amplifier.

117. (New) The integrated circuit interconnection of claim 99, wherein the signal input node for each amplifier is coupled to a transmission line which has a length of at least 1000 micrometers.

118. (New) The integrated circuit interconnection of claim 99, wherein the signal input node for each amplifier is coupled to a transmission line which has a length of at least 500 micrometers.

119. (New) An integrated circuit interconnection comprising:

a transmission line having a characteristic impedance less than 100 Ohms, the transmission line including a first end and a second end;

a driver coupled to the first end of the transmission line;

a termination at the second end of the transmission line having an impedance corresponding to the characteristic impedance of the transmission line; and

a plurality of components selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements, the components being connected at spaced intervals to the transmission line between the first and second ends to change an apparent length of the transmission line, wherein the termination circuit comprises a pair of cross-coupled amplifier circuits coupled to the second end of the transmission line, the amplifier circuits comprising:

a first transistor of a first conductivity type, a signal input node coupled to a source region of the first transistor;

a second transistor of a second conductivity type, wherein the first and second transistors are coupled at a drain region; and

a signal output node coupled to the drain region of the first and second transistor in the current sense amplifier, the signal output node further coupled to a gate of a third transistor.

120. (New) The integrated circuit interconnection of claim 119, wherein a source region of the third transistor is coupled to a source region of the second transistor, and wherein a drain region of the third transistor is coupled to the signal input.

121. (New) The current sense amplifier of claim 119, wherein the first transistor of a first conductivity type includes an n-channel metal oxide semiconductor (NMOS) transistor, and wherein the second transistor of a second conductivity type includes a p-channel metal oxide semiconductor (PMOS) transistor.

122. (New) The current sense amplifier of claim 119, wherein the drain region for the first and the second transistor in the first amplifier are coupled to gates of the second transistor in the first and the second amplifier.

123. (New) The current sense amplifier of claim 119, wherein the third transistor is an n-channel metal oxide semiconductor (NMOS) transistor.

124. (New) The current sense amplifier of claim 119, wherein the signal input node of the first amplifier receives an input current, and wherein the signal input node of the second amplifier receives a reference current.

125. (New) An integrated circuit interconnection for minimizing clock skews among a plurality of transmission lines, comprising:

at least one transmission line having a characteristic impedance less than 100 Ohms, the at least one transmission line including a first end and a second end;

a driver coupled to the first end of the at least one transmission line;

a termination circuit at the second end of the at least one transmission line having an impedance corresponding to the characteristic impedance of the at least one transmission line for reducing ringing and reflections, the termination including a pair of cross-coupled amplifiers coupled to the second end of the at least one transmission line; and

a plurality of components selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements, the components being connected at spaced intervals to the at least one transmission line between the first and second ends for changing the propagation constant and delay time of the at least one transmission line so as to match with at least one other of the plurality of transmission lines.

126. (New) The integrated circuit interconnection of claim 125, wherein the components are a combination of capacitive and inductive elements.

127. (New) The integrated circuit interconnection of claim 125, wherein a plurality of interconnection lines are connected to the at least one transmission line.

128. (New) The integrated circuit interconnection of claim 125, wherein the components are a plurality of capacitive elements.

129. (New) The integrated circuit interconnection of claim 128, wherein the capacitive elements are selected from the group consisting of metal-metal, metal-polysilicon and polysilicon-polysilicon capacitors.

130. (New) The integrated circuit interconnection of claim 128, wherein the capacitive elements are gate capacitances of field effect transistors used as capacitors.

131. (New) The integrated circuit interconnection of claim 125, wherein the components are a plurality of inductive elements.

132. (New) The integrated circuit interconnection of claim 131, wherein the inductive elements are spiral inductors serially implanted in the at least one transmission line.

133. (New) The integrated circuit interconnection of claim 131, wherein the inductive elements are formed by depositing material with a higher magnetic permeability on the at least one transmission line for increasing self inductance of the at least one transmission line.

134. (New) A method for fabricating an integrated circuit comprising the steps of:

forming a plurality of transmission lines having a characteristic impedance, each of the transmission lines including a first end and a second end;

forming a driver coupled to the first end of one of the transmission lines;

forming a pair of cross-coupled amplifiers, one of the pair of cross-coupled amplifiers coupled to the second end of the one transmission line and having an input impedance corresponding to the characteristic impedance of the one transmission line; and

forming a plurality of components connected at spaced intervals to the one transmission line between the first and second ends to change an apparent length of the one of the transmission lines to match with at least one other of the plurality of transmission lines, the components being selected from the group consisting of capacitive elements, inductive elements and a combination of capacitive and inductive elements.

135. (New) The method of claim 134, wherein the components are a plurality of capacitive elements.

136. (New) The method of claim 135, wherein the capacitive elements are selected from the group consisting of metal--metal, metal-polysilicon and polysilicon--polysilicon capacitors.

137. (New) The method of claim 135, wherein the capacitive elements are gate capacitances of field effect transistors used as capacitors.

138. (New) The method of claim 134, wherein the components are a plurality of inductive elements.

139. (New) The method of claim 138, wherein the inductive elements are spiral inductors serially formed in the transmission lines.

140. (New) The method of claim 138, wherein the inductive elements are formed by depositing material with a higher magnetic permeability on the transmission lines for increasing self inductance of the transmission lines.

141. (New) The method of claim 134, wherein the components are a combination of capacitive and inductive elements.

142. (New) The method of claim 134, wherein the transmission lines have a characteristic impedance of less than 50 Ohms.

143. (New) The method of claim 134, further comprising forming a plurality of interconnection lines connected to the transmission lines.

144. (New) The method of claim 134, wherein the one of the pair of cross-coupled amplifiers has an input impedance of less than 50 Ohms.